Supplementary Materials

A Study on Thermal Behaviour of Thermal Barrier Coating: Investigation of Particle Size, YSZ/Polysilazane, Time and Temperature Curing Effect

Widyastuti*[a], Liyana Labiba Zulfa[b], Wafiq Azhar Rizaldi[a], Jauhari Azhar[a], Ninik Safrida[a], Azzah Dyah Pratama[a], Ruri Agung Wahyuono[c], Sulistijono[a], Rindang Fajarin[a], Arif Nur Hakim[c]

[a] Department of Materials and Metallurgical Engineering, Faculty of Industrial Technology and Systems Engineering, Institut Teknologi Sepuluh Nopember, Jl. Arif Rahman Hakim, Kampus ITS Keputih-Sukolilo, Surabaya 60111, Indonesia, e-mail:wiwid@mat-eng.its.ac.id
[b] Department of Chemistry, Faculty of Science and Data Analytics, Institut Teknologi Sepuluh Nopember, Jl. Arif Rahman Hakim, Kampus ITS Keputih-Sukolilo, Surabaya 60111, Indonesia
[c] National Research and Innovation Egency, Tangerang 15314, Indonesia
[d] Department of Engineering Physics, Faculty of Industrial Technology and Systems Engineering, Institut Teknologi Sepuluh Nopember, Jl. Arif Rahman Hakim, Kampus ITS Keputih-Sukolilo, Surabaya 60111, Indonesia

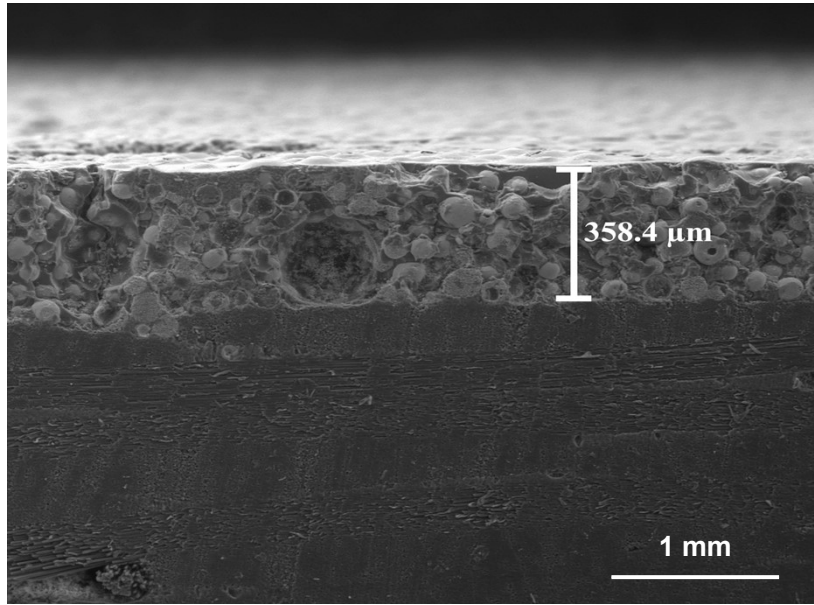* Corresponding Author. E-mail: wiwid@mat-eng.its.ac.id;
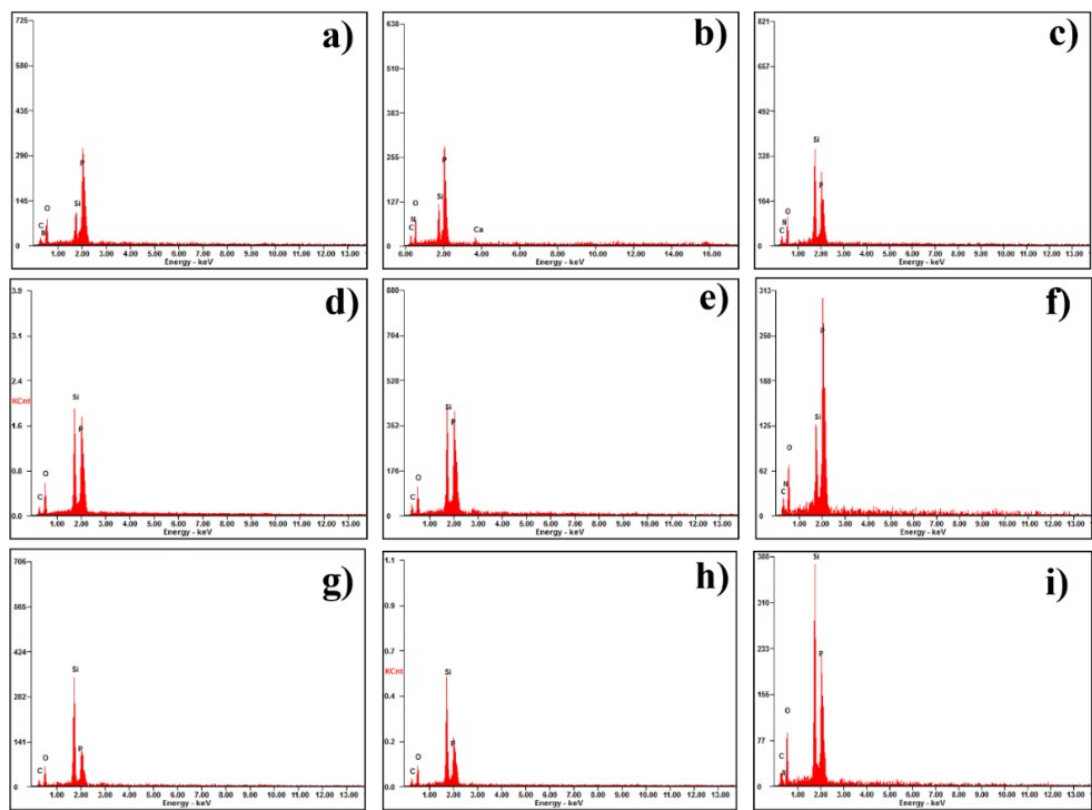
Figure S1. Micro cross-section of SB140/70

Figure S2. Elemental distrubution of specimen (a) SB140/70, (b) SB140/60, (c) SB140/50, (d) SB200/70, (e) SB200/60, (f) SB200/50, (g) SB270/70, (h) SB270/60, and (i) SB270/50
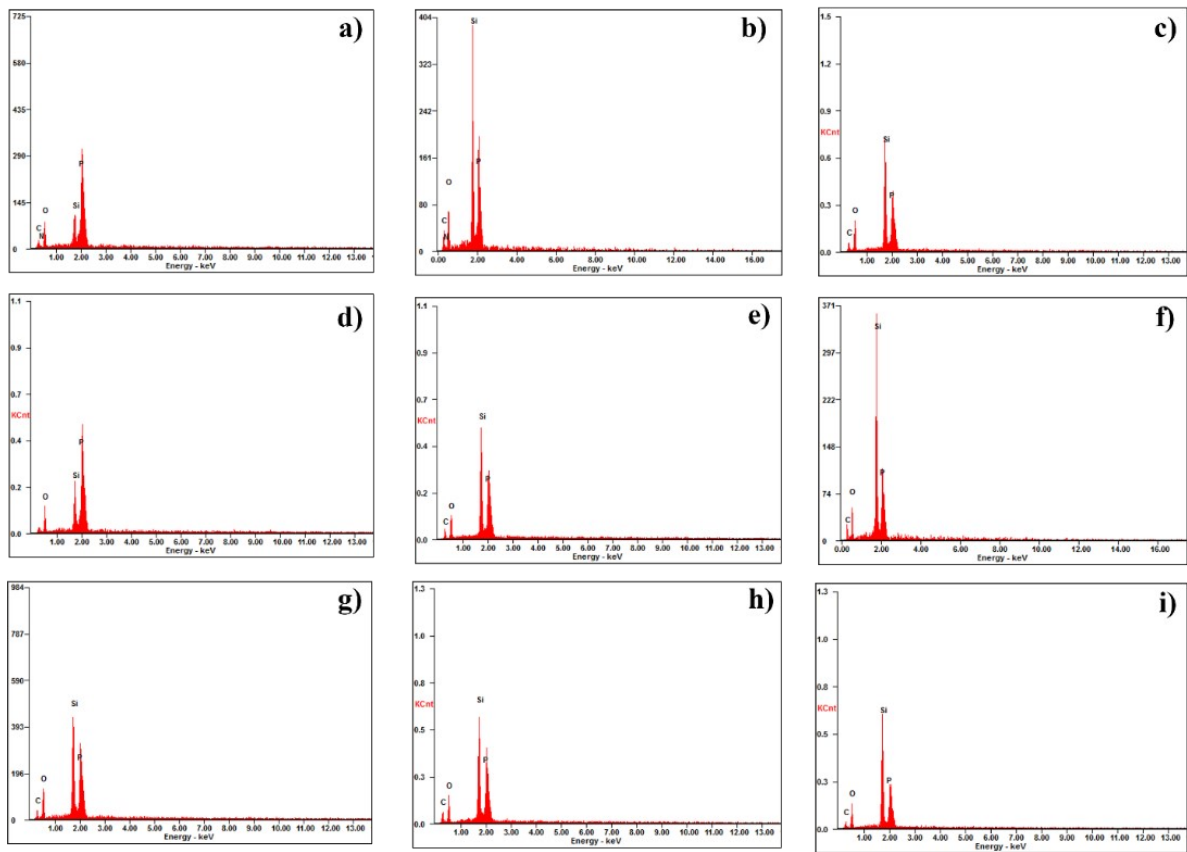
Figure S3. Elemental distribution of specimen (a)TB60/130, (b)TB60/160, (c)TB60/190, (d) TB120/130, (e)TB120/160, (f)TB120/190, (g) TB180/130, (h)TB180/160, and (i)TB180/190
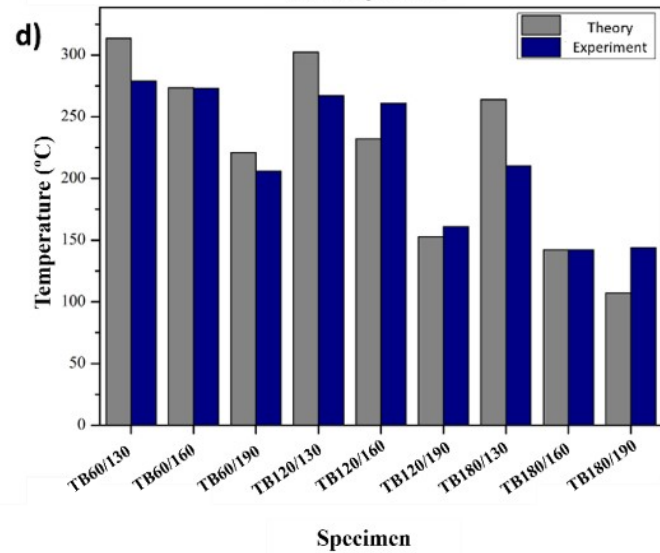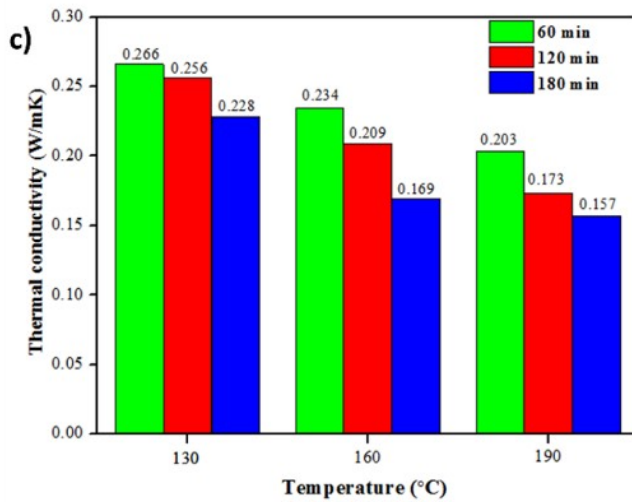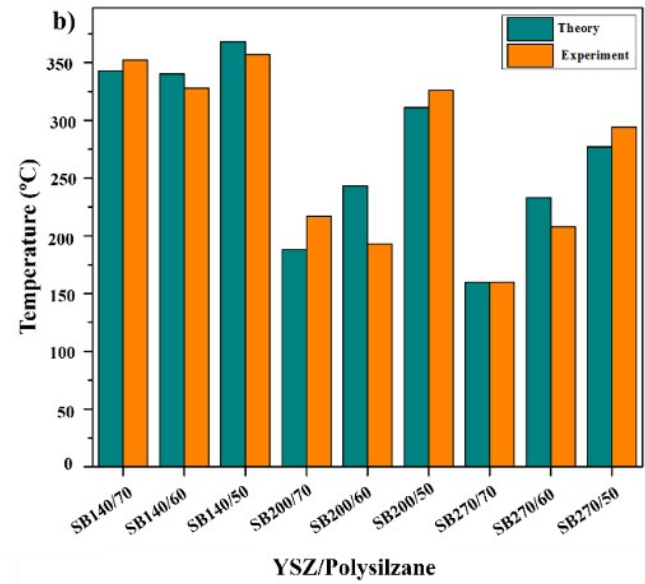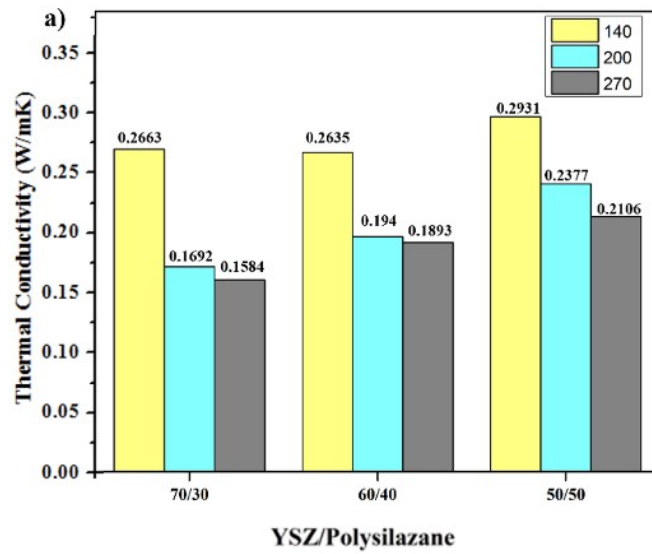
Figure S4. Thermal conductivity of (a) particle size and YSZ/polysilazane variations (c) time and temperature curing and Comparison of the final temperature based on theoriticals and experiments of (b) particle size and YSZ/polysilazane variations (d) time and temperature curing